

Abstract of the Disclosure:

[00072] A test strip reader is provided with an optical mouse integrated circuit sensor that reads the test line, reference line and control line of a lateral flow assay strip by light absorption and determines the position of the test strip beneath the image on the integrated circuit board using digital signal processing algorithms. The digital signal processing algorithms process the imaged surface at a very high rate (e.g., 1500 frames per second) to determine the direction and speed of movement of the lateral strip with respect to the reader optics and image capture components. The sensor outputs this position information in a quadrature pattern format. A microcontroller uses the known position of the strip with respect to the reader to calculate the optical absorption of each colored reagent line, and the diagnostic significance (i.e., either qualitative or quantitative) of the test strip.